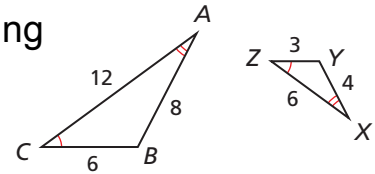


LESSON
7-1

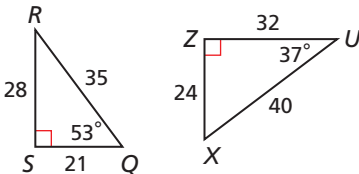
Ratio in Similar Polygons

1. Identify the pairs of congruent angles and corresponding sides.

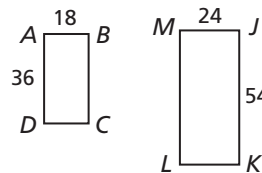


Determine whether the polygons are similar. If so, write the similarity ratio and a similarity statement..

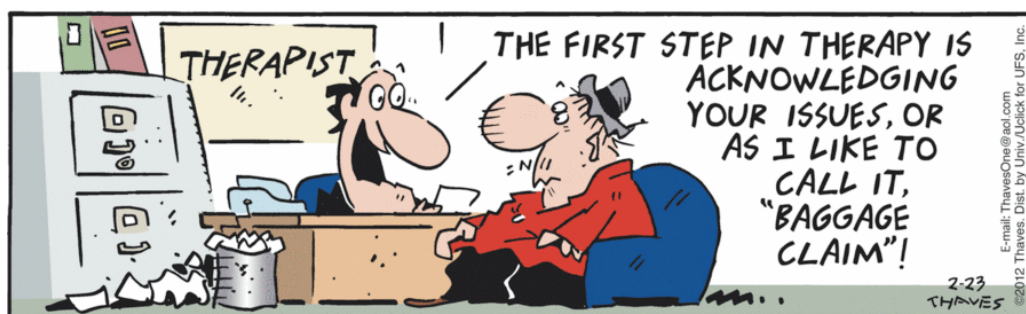
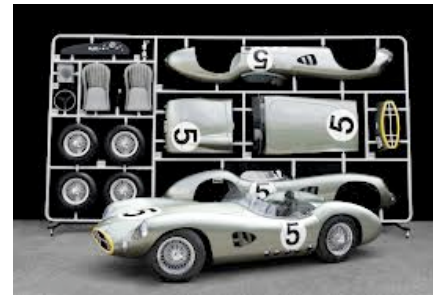
2.



3.



4. The ratio of the model car's dimensions to the actual car's dimensions is $\frac{1}{56}$. The model has a length of 3 in. What is the length of the actual car?



Write A if the statement is always true, S if the statement is sometimes true and N if the statement is never true. Be prepared to defend your answer.

5. _____ Two right triangles are similar.
are similar.

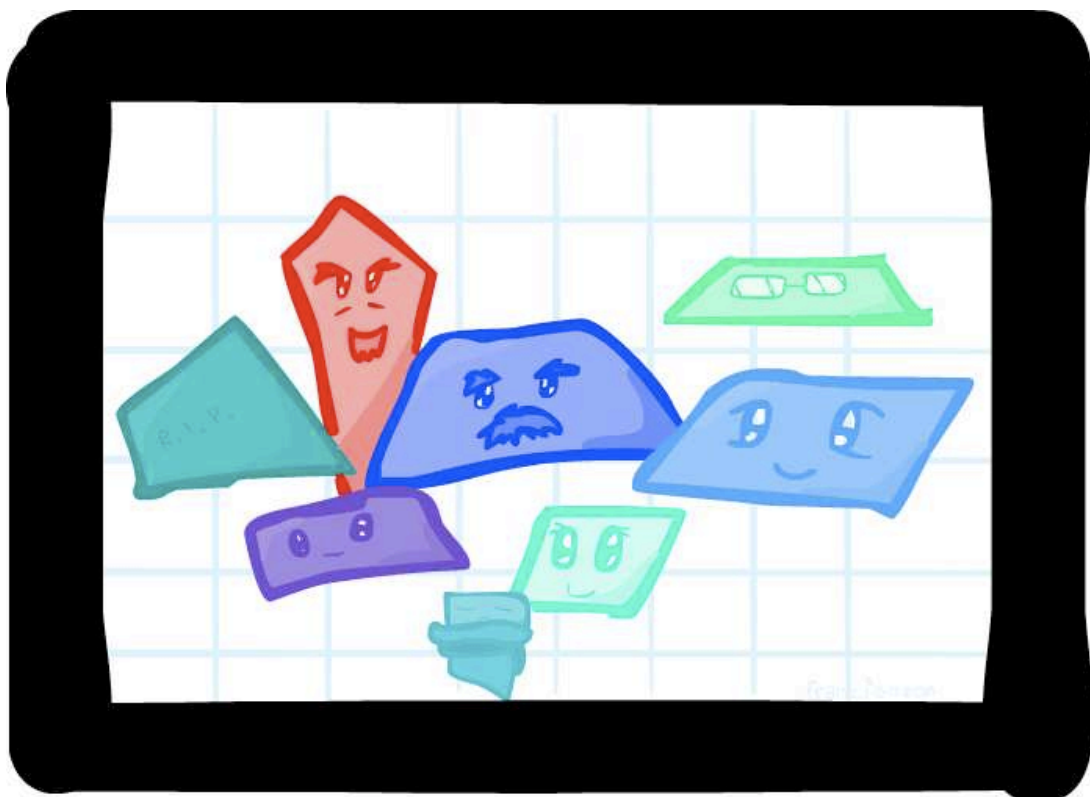
6. _____ Two squares

7. _____ A parallelogram and a trapezoid are similar.

8. _____ If two polygons are congruent, they are also similar.

9. _____ If two polygons are similar, they are also congruent.

10. Explain why any two regular polygons having the same number of sides are similar.



A stage set consists of a painted backdrop with some wooden flats in front of it. One of the flats shows a tree that has a similarity ratio of $\frac{1}{2}$ to an actual tree. To give an illusion of distance, the backdrop includes a small painted tree that has a similarity ratio of $\frac{1}{10}$ to the tree on the flat.

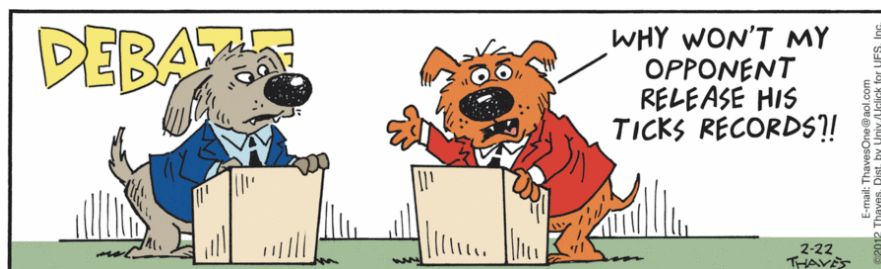


11. The tree on the backdrop is 0.9 ft tall. What is the height of the tree on the flat?

12. What is the height of the actual tree?

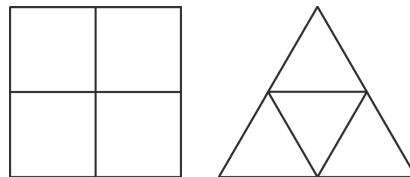
13. Find the similarity ratio of the tree on the backdrop to the actual tree.

14. An architect is designing a building that is 200 ft long and 140 ft wide. She builds a model so that the similarity ratio of the model to the building is $\frac{1}{500}$. What is the length and width of the model in inches?



15. A figure is called a **rep-tile** if copies of the figure fit together to form a larger similar figure.

These figures are rep—tiles. Four equal figures fit together to form a larger similar figure. Notice the larger square and the four equal squares inside it. Likewise, this equilateral triangle has four equilateral triangles inside it. The inner figures are similar to the outer figures.



The figure below can become rep—tile. Draw four smaller, equal figures inside the figure shown here. The figures drawn must be similar to the original figure.

